Proposal:

We propose integrating bamboo bicycles into the economy of a developing nation that is need of better transportation to facilitate their livelihood. In specific, our research has concentrated on introducing bamboo bikes and bamboo bike manufacturing to Kumasi, Ghana.

We do not view bikes as a suitable replacement for cars, buses, etc. in a country where this infrastructure has already been developed. In developed countries bicycles can supplement existing transportation, but we are more interested in using the bicycle and sustainable design to reformulate how people move and how cities are designed in developing nations. From our research, it appears that many people are uninterested in using bicycles when taxis, buses, or cars are readily available. Our focus is a nation where public transportation is not readily or easily available, and private modes of transportation is primarily walking or biking.

Our goal is to make the bicycle not only accessible, but to make it affordable. Currently, bikes are imported into Ghana. These bicycles are expensive and tend to break easily or are not meant to ride on the unpaved roads: this makes them not only a costly commodity but an unsustainable one.

Ultimately, we would like to help regions and cities, such as Kumasi, that need bicycles by teaching them how to build bicycles out of bamboo. By building their own vehicles, they can not only build it to their specifications (i.e for the terrain), but they will form an attachment to the product. They will be more likely to use it to its fullest potential then. By teaching them how to build bicycles from a sustainable material (bamboo), we can not only remove the need to import bicycles across long distances, but we can promote “green” engineering. Once we are able to teach a region how to build bicycles, they can sell their bicycles back to the community. This will grow their work force and economy, and it will enable many to have cheap access to transportation, which can in turn allow the citizens to go to school, hospitals, markets, or easily transport goods. Having access to this technology can not only inspire the community to start building these bicycles, but the people who buy the bicycles will find a way to use them to their fullest potential. It will free them from the constraints of the lack of transportation in the region and allow them to fully explore their potential.